New Mexico Computing Applications Center

Vision

Supercomputing

Creates High-Paying Jobs and New Job Opportunities

Trains and Equips Our Students to be More Competitive

The Center Will:

Create a Magnet for Business Growth

Elevate our Business Profile Nationally and Internationally

Open Gateways to High Tech at Local Levels

Tom Bowles
Science Advisor to Gov. Richardson

Request to the Legislature

- Set up the Center:
  - $20M in FY07 *($42M total over 5 years)*
  - *Primary goal: jobs and education*
- The Center will help New Mexico win a $200M National Science Foundation Petascale Computing Facility
  - $5M total over 5 years
  - *Primary goal: national user facility - basic R&D*
- These two initiatives are independent, but rely on each other to achieve our long-term goals.

What Supercomputing Does

- Supercomputing helps create new products through simulation instead of expensive testing and prototyping.
- Supercomputing empowers states and municipalities to develop their own initiatives in water use, health services, energy, and more.
- Supercomputing educates students at world-class levels.

Supercomputing is an industry - it offers unique advantages and opportunities.

Impact of Supercomputing

Boeing 777 was designed and tested on supercomputers, saving Boeing 1 year in development and $2B in costs.

Proctor & Gamble applied supercomputing to optimizing production, resulting in $1B savings for P&G.

Crest

Pampers

head & shoulders

Growing Business in New Mexico

- The Center will merge computing with technology from our Labs and Universities.
- It will show business we have the tools they need to locate here.
- It will open the door to new collaborations for small-to-medium sized businesses and assist them in producing better products at lower cost.

The Center will create high national visibility for New Mexico.

Education

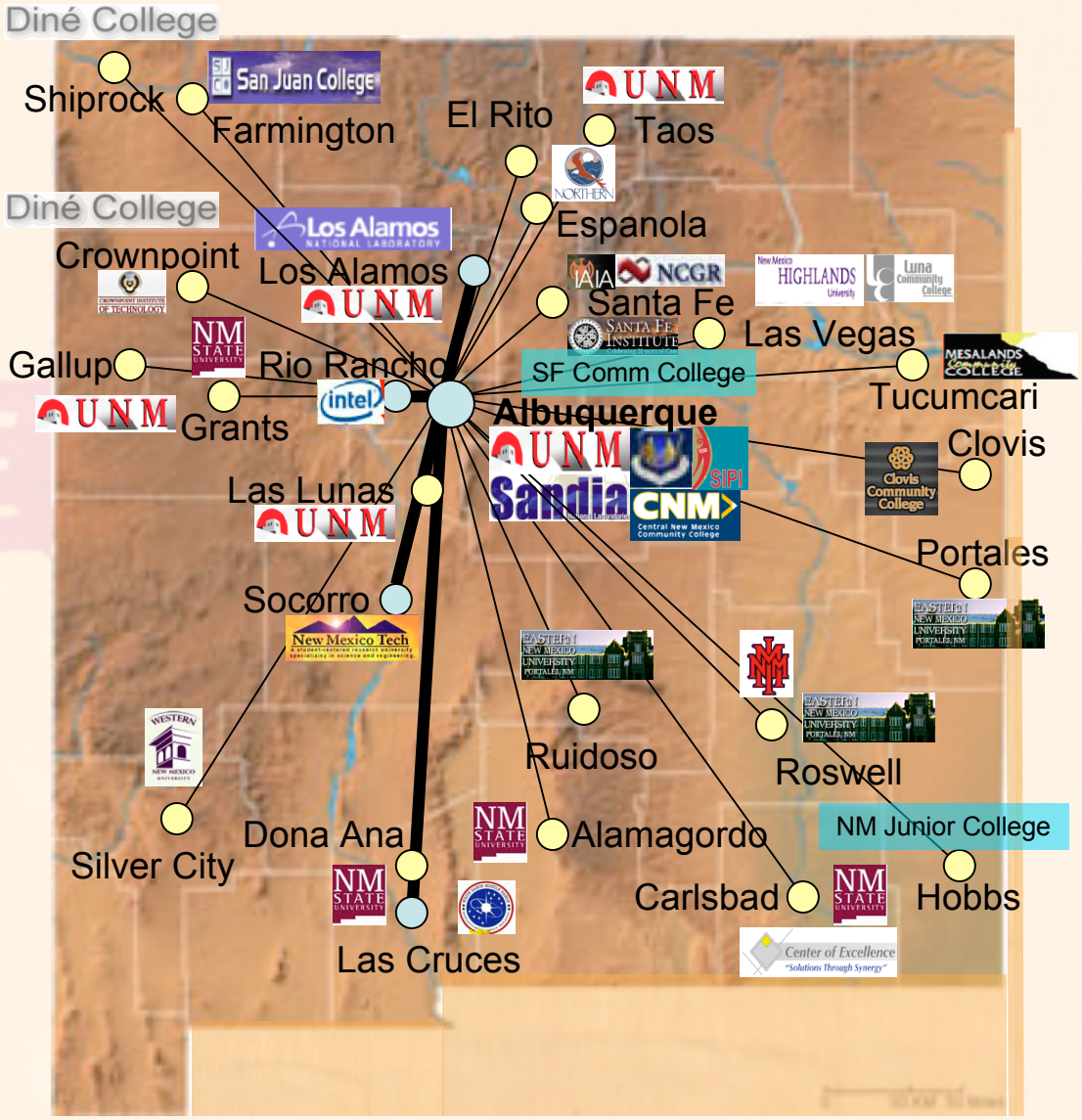
- Supercomputing can attract kids to Science and Technology
- The Center will educate teachers and students about supercomputing
- The Center will be a resource for our current education programs (e.g., IDEAL)
- The Center will promote high-tech jobs to keep our kids working here in New Mexico

New Gateways for New Mexico

Gateways to:

- Small Business
- Large Business
- Education
- Municipalities

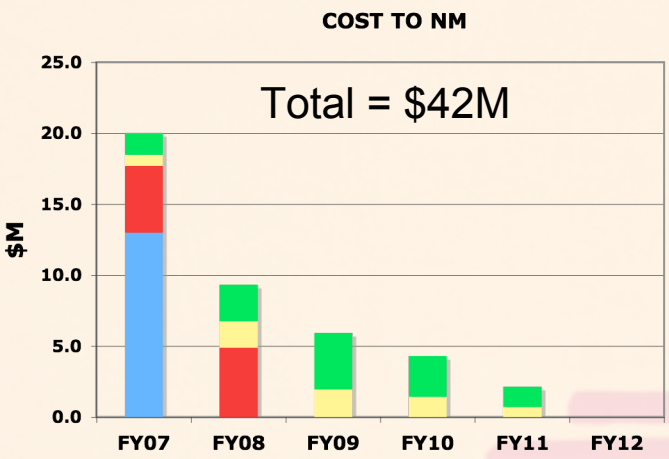
Will connect New Mexico for unprecedented cooperation

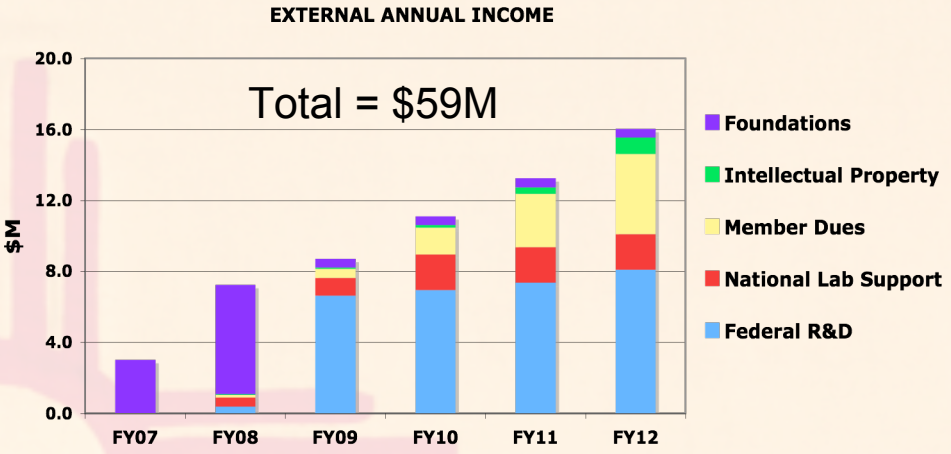


Center Facilities

- One of the fastest computers in the world (*100,000 times faster than desktop)* performing 200 trillion calculations per second *(200 TeraFlop computer)*
- Up and running by end of 2007.
- Center located at a research park in Albuquerque with 40,000 sq ft building housing up to 200 staff
- Fully-equipped gateways at NMSU and NMT
- Expandable connections to the Labs and R&D facilities and businesses

Budget



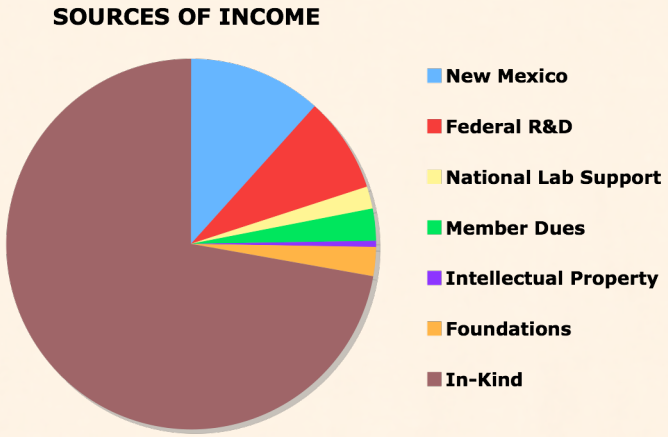


Transition to self-sufficiency in 5 years

Founding Partners

State of New Mexico
NMSU, NMT, UNM
LANL, Sandia
Intel

Establish as 501(c)(3)
w Board of Directors
Oversight by the State



$40M/year in-kind member contributions

Investing in the Future

- Economic return
  - Project more than $650M in additional revenue in NM over 5 years
- Educational return
  - Provide supercomputer-based instruction to 100 teachers and 6,000 students (K-12) per year
  - 150 college students/year doing research
  - Provide 500 high-tech jobs/year for NM students
- Community return
  - Provide resources to communities to develop optimal solutions to a wide range of issues

Supercomputing is an Essential Tool to move New Mexico Forward